



ServeRAID-MR10M SAS/SATA Controller with Remote Battery Kit, Li-Ion Battery, ServeRAID Remote Battery Mount and Cable Kit offers flexibility and support for host bus adapters

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At a glance

IBM introduces ServeRAID™ options, expanding the usage of ServeRAID-MR10 controllers across the majority of System x™ servers.

ServeRAID-MR10M SAS/SATA Controller with Remote Battery Kit (44E8825)

ServeRAID-MR10M SAS/SATA Controller with remote battery kit is a high-performance PCIe RAID Controller for External Direct Attached Storage enabled for remote battery mounting.

ServeRAID-MR10i Li-Ion Battery (44E8826)

The Li-Ion Battery replaces ServeRAID-MR10i (NiMH) Battery.

ServeRAID Remote Battery Mount and Cable Kit (44E8822)

Battery Mount and Cable Kit provides the components necessary to enable expansion of RAID adapter compatibility across the System x server line with a longer signal cable and enablement of remote battery mounting.

For technical support:

- Call the IBM® Support Center at 800-IBM-SERV (426-7378)
or
- Request technical information via the Web site at
<http://www.ibm.com/pc/support>

Overview

ServeRAID-MR10M SAS/SATA Controller with Remote Battery Kit (44E8825)

ServeRAID-MR10M SAS/SATA Controller is a high-performance PCIe RAID Controller for External Direct Attached Storage RAID 0, 1, 10, 5, 50, 6, and 60. This small form factor (MD2) adapter with battery-backed DDR2 cache (BBU) utilizes an LSI 1078 controller with an x8 PCI Express host interface and eight external SAS/SATA II 3 Gb/s ports. MegaRAID Storage Manager (MSM), included with ServeRAID-MR10M, is a robust RAID management, configuration, and reporting application.

While the adapter is identical to ServeRAID-MR10M SAS/SATA Controller (43W4339), this new option includes a battery cable which enables the remote mounting of the battery within the

system chassis, thus expanding the usage of ServeRAID-MR10M across additional System x servers.

ServeRAID-MR10M SAS/SATA Controller with Remote Battery Kit is supported on x3350, x3550, x3650, and x3655 systems.

ServeRAID-MR10i Li-Ion Battery (44E8826)

The Li-Ion Battery replaces ServeRAID-MR10i (NiMH) Battery (43W3299). It enhances the ServeRAID-10i controller's performance by allowing data being written to disk to be cached in battery-backed high speed memory. The battery can provide protection of cached data during an unexpected power outage.

This new option includes a battery cable which enables the remote mounting of the battery within the system chassis, thus expanding the usage of ServeRAID-MR10i across additional System x servers.

ServeRAID-MR10i Li-Ion Battery is supported on ServeRAID-MR10i SAS/SATA Controller (43W4296)

Note: The ServeRAID-MR10 SAS/SATA PCIe Controllers are covered by a one-year, limited warranty¹. Batteries are consumables; therefore, not covered under this warranty. The battery option ships in its own packaging separate from the adapter.

ServeRAID Remote Battery Mount and Cable Kit (44E8822)

Remote Battery Mount and Cable Kit provides the components necessary to enable expansion of our ServeRAID-MR10 products across additional System x servers. Included:

- HDD signal cable (SAS cable) for attachment flexibility within models with shorter SAS cables.
- One remote battery cable, which enables remote mounting of batteries for previously announced options ServeRAID-MR10M (43W4339) and/or ServeRAID-MR10i Battery (43W4299).
- Remote battery shelf for use with System x 3650 and 3655, provides secure housing for up to three remotely mounted batteries.
- System x 3650 supports up to four RAID adapters with batteries; three remotely mounted, and one mounted on the adapter in slot 1.

¹ For information on the IBM Statement of Limited Warranty, visit

http://www.ibm.com/servers/support/machine_warranties/

Alternatively, this information is also available by contacting your IBM representative or reseller. Copies are available upon request.

Key prerequisites

Supported IBM System x servers with an available PCI Express expansion slot.

Planned availability date

September 12, 2008

Description

ServeRAID-MR10M SAS/SATA Controller with Remote Battery Kit (44E8825)

ServeRAID-MR10M SAS/SATA Controller is a high-performance PCIe RAID Controller for External Direct Attached Storage RAID 0, 1, 10, 5, 50, 6, and 60. This small form factor (MD2) adapter with battery-backed DDR2 cache (BBU) utilizes an LSI 1078 controller with an x8 PCI Express host interface and eight external SAS/SATA II 3 Gb/s ports. MegaRAID

Storage Manager (MSM), included with ServeRAID-MR10M, is a robust RAID management, configuration, and reporting application.

While the adapter is identical to ServeRAID-MR10M SAS/SATA Controller (43W4339), this new option includes a battery cable which enables the remote mounting of the battery within the system chassis, thus expanding the usage of ServeRAID-MR10M across additional System x servers.

ServeRAID-MR10i Li-Ion Battery (44E8826)

ServeRAID-MR10i Li-Ion Battery replaces ServeRAID-MR10i (NiMH) Battery, (43W4299). It enhances the ServeRAID-10i controller's performance by allowing data being written to disk to be cached in battery-backed high speed memory. The battery can provide protection of cached data during an unexpected power outage.

This new option includes a battery cable which enables the remote mounting of the battery within the system chassis, thus expanding the usage of ServeRAID-MR10i across additional System x servers.

Note: The IBM ServeRAID-MR10 SAS/SATA PCIe Controllers are covered by a one-year, limited warranty¹. Batteries are consumables; therefore, not covered under this warranty. The battery option ships in its own packaging separate from the adapter.

ServeRAID Remote Battery Mount and Cable Kit (44E8822)

ServeRAID Remote Battery Mount and Cable Kit provides the components necessary to expand compatibility of our ServeRAID-MR10 products across additional System x servers. Included:

- HDD signal cable (SAS cable) for attachment flexibility within models with shorter SAS cables.
- One remote battery cable, which enables remote mounting of batteries for previously announced options ServeRAID-MR10M (43W4339) and ServeRAID-MR10i Battery (43W4299).
- Remote battery shelf for use with System x 3650 and 3655, which provides secure housing for up to three remotely mounted batteries.
- System x 3650 supports up to four RAID adapters with batteries, three remotely mounted, and one mounted on the adapter in slot 1.

Compatibility

- Support for popular network operating systems
- ServerProven® testing: Verifies servers, HDDs, and the ServeRAID-MR10 functions properly
- IBM simple-swap and high-speed SAS and SATA cables
- Supported utilities are MSM, IBM Director, DSA, CLI, and flash drive

Additional information

All offers are subject to availability. IBM reserves the right to alter product offerings and specifications at any time without notice. IBM is not responsible for photographic or typographic errors.

IBM makes no representation or warranty regarding third-party products or services.

¹ For information on the IBM Statement of Limited Warranty, visit

http://www.ibm.com/servers/support/machine_warranties/

Alternatively, this information is also available by contacting your IBM representative or reseller. Copies are available upon request.

Product number

Options SEOs

Description	SEO Number
ServerRAID-MR10M SAS/SATA Controller with Remote Battery Kit	44E8825
ServerRAID-MR10i Li-Ion Battery	44E8826
ServerRAID Remote Battery Mount and Cable Kit	44E8822

Controller options information

Product name

- ServeRAID-MR10M SAS/SATA RAID Controller with Remote Battery Kit (44E8825)
- ServeRAID-MR10i Li-Ion Battery (44E8826)
- ServeRAID Remote Battery Mount and Cable Kit (44E8822)

Announcement and availability dates

	Announce date	Planned availability date
US	August 26, 2008	September 12, 2008

Product number

Options SEOs

Description	SEO number
ServerRAID-MR10M SAS/SATA Controller with Remote Battery Kit	44E8825
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Technical information

Performance specifications

ServerRAID-MR10M SAS/SATA Controller

- Functions as a HDD RAID controller
- RAID levels: 0, 1, 10, 5, 6, 50, and 60
- 8-lane 2.5 Gbps PCI Express
- Cache size 256 MB ECC DDR2
- Up to 3 GB/second of performance throughput for each port at full duplex
- Supports independent and adjustable stripe unit sizes up to 1024 KB default 256 KB
- Logical Drive Migration, Global Hot Spare, and Rebuild and Rapid Restore® features
- ServeRAID-MR10M has two x4 external SFF-8088 connectors

Physical specifications

ServeRAID-MR10M (without mounting bracket)

- Height: 68.8 mm (2.71 in)
- Width: 169.5 mm (6.67 in)
- Depth: 16.6 mm (0.65 in)
- Weight: 0.170 kg (0.375 lb)

Remote Battery Shelf (with trays)

- Height: 57.4 mm
- Width: 92.5 mm
- Depth: 105.2 mm

Remote Battery Cable (black)

- Length: 711.2 mm (28 in)

SAS Signal Cable (red)

- Length: 635.0 MM (25 in)

Note: All measurements are approximate.

Operating environment

- Temperature:
 - 10° to 35° C (50° to 95° F) at 0 to 914 m (0 to 3000 ft)
 - 10° to 32° C (50° to 90° F) at 914 to 2,133 m (3,000 to 7,000 ft)
- Relative humidity: 8% to 80%, non-condensing

Agency approvals

Safety

- UI
- cUL
- IEC60950

EMC

- FCC
- TUV
- VDE
- CE
- VCCI
- BSMI
- C-Tick
- MIC

Energy Star compliance

Is this product Energy Star Compliant? No

Note: The Energy Star emblem does not represent EPA endorsement of any product or service.

Hardware requirements

The ServeRAID-MR10M Controller (44E8825) is supported on the following IBM platforms.

System name	x3350	Machine type	4192 4193	Model	A11 A11
	x3650		7979		A11
	x3655		7985		A11

Software requirements

Support for all major operating systems:

- Microsoft® Windows®
- Linux® Red Hat
- VMware
- SUSE Linux

Compatibility

For latest compatibility information, visit

<http://www.ibm.com/servers/eserver/serverproven/compat/us/>

Note: Some configurations may not be compatible.

Limitations

Remote Battery Mount and Cable Kit is required when any of the following conditions are met:

- x3650 or x3655 System with ServeRAID-MR10i/iS SAS/SATA controller is ordered with 2.5-inch drives (need 1 HDD signal Cable)
- x3650 or x3655 System with 2 or more ServeRAID-MR10 controllers (w/ batteries) ordered (need 1 Remote Battery Shelf per system and 1 Remote Battery Cable per battery)
- Existing x3650 or x3655 systems expanding capability to use multiple ServeRAID-MR10 controllers (need 1 Remote Battery Shelf per system and 1 Remote Battery Cable per battery)

Note

Customers ordering new options:

1. ServeRAID-MR10M SAS/SATA controller with Remote Battery kit (44E8825)
and/or
2. ServeRAID-MR10i Li-Ion Battery (44E8826) will receive the needed remote battery cable within the option kit.

Planning information

- Additional cable orders required: No
- Approximate installation time: 20 minutes

Packaging

One box

Shipment group

ServRAID MR10M SAS/SATA Controller with Remote Battery Kit

- ServRAID MR10M controller
- SAS cable
- Quick install
- Battery

- Remote battery cable
- Low profile bracket
- Safety flyer

Packaging dimensions and weight

- Height: 68.8 mm (2.71 in)
- Width: 169.5 mm (6.67 in)
- Depth: 16.6 mm (0.65 in)
- Weight: .619 kg (1.345 lb)

ServeRAID-MR10i Li-Ion Battery

- Battery
- Remote battery cable
- Battery backup flyer
- Remote Battery flyer

Packaging dimensions and weight

- Height: 53.2 mm (2.09 in)
- Width: 178.5 mm (7.03 in)
- Depth: 151.6 mm (5.97 in)

ServeRAID Remote Battery Mount and Cable Kit

- SAS Signal Cable
- Remote Battery cable
- Remote Battery shelf
- Remote Battery flyer

Packaging dimensions and weight

- Height: 86.0 mm (3.39 in)
- Width: 178.0 mm (7.00 in)
- Depth: 235.0 mm (9.25 in)
- Weight: 239.0 kg (108.6 lb)

Note: All measurements are approximate.

Security, auditability, and control

This product uses the security and auditability features of the host hardware, software, and application software.

Terms and conditions

IBM DIRECT TERMS AND CONDITIONS FEATURES AND OPTIONS ONLY

Field installable	Yes
Customer setup	Yes
warranty period*	1 yr.
Service type (CCE/CCR/CRU)	CRU
Maintenance agreement	No
Optional upgrade	No
Licensed programs	No

Note: The IBM ServeRAID-MR10 SAS/SATA PCIe Controllers are covered by one-year, limited warranty. Batteries are consumables; therefore, not covered under this warranty. The battery option ships in its own packaging separate from the adapter.

Note: Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the feature or option. All other terms and conditions are the same as those applicable to the IBM machine type in which the feature is installed.

* To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or call IBM.

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http://www-1.ibm.com/servers/support/machine_warranties/machine_code.html

IBM may release changes to the Machine Code. IBM plans to make the Machine Code changes available for download from the IBM System x technical support Web site

<http://www-304.ibm.com/systems/support/>

If the machine does not function as warranted and your problem can be resolved through your application of downloadable Machine Code, you are responsible for downloading and installing these designated Machine Code changes as IBM specifies. If you would prefer, you may request IBM to install downloadable Machine Code changes; however, you may be charged for that service.

In the United States, call 800-426-7378, or write to:

Warranty Information
P.O. Box 12195
Research Triangle Park, NC 27709
Attn: Dept UF2A/B203.

Help and service information - Features and options

During the warranty period, you can obtain technical support using IBM's online services or by calling the IBM Support Center at 800-426-7378 24 hours a day, 7 days a week, to answer any questions regarding your new IBM option. Response time will vary depending on the number and nature of calls received. If you have no warranty service, return or exchange is available. In addition, if your IBM option is installed in an IBM computer, you may be entitled to service at your location. For general questions related to the use of your options, fee-based support is available. Your technical support representative can help you determine the best alternative.

Accessing IBM online services

Visit

<http://www.ibm.com/support>

Placing the call to IBM

Within the United States, call the IBM Support Center at 800-426-7378.

Prices

For additional information and current prices, contact your local IBM representative.

For current prices, contact IBM at 888-Shop-IBM (746-7426) or visit

<http://www-03.ibm.com/systems/x/>

Options SEOs

Description	SEO number
ServerAID-MR10M SAS/SATA Controller with Remote Battery Kit	44E8825
ServerAID-MR10i Li-Ion Battery	44E8826
ServerAID Remote Battery Mount and Cable Kit	44E8822

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